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(71) Applicant (for all designated States except US): S & S COM CO., LTD. [KR/KR]; Bosung Bldg., F4, 124-14, Chungdam-dong, Kangnam-gu, Seoul 135-100 (KR).

(72) Inventor; and

(75) Inventor/Applicant (for US only): KIM, Jae, Myung

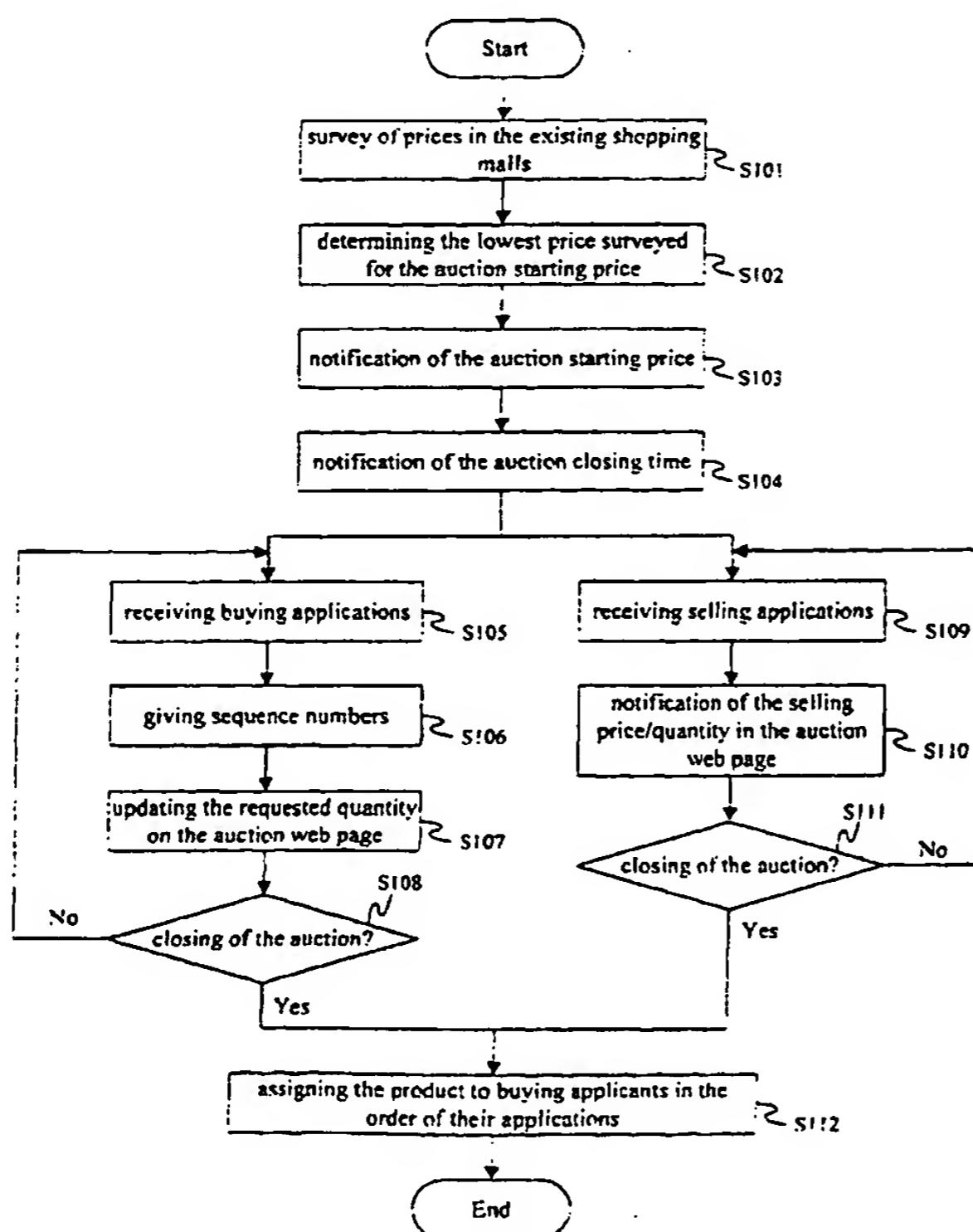
(74) Agent: KIM, Samsoo; Dukwon Building, 3rd floor, 637-19 Yoksam-dong, Kangnam-ku, Seoul 135-080 (KR).

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[Continued on next page]

(54) Title: METHOD OF AUCTIONING BASED ON COOPERATIVE BUYING IN INTERNET



(57) Abstract: The present invention relates generally to a method for Internet auction based on cooperative buying on the internet, in which the lowest price for a good concerned among shopping malls surveyed is determined and notified as an auction starting price; then, applications from cooperative buyers for purchase below the price notified are received and further notified; subsequently, bidding of lower prices by the sellers, triggered by the number of the cooperative buyers notified, are allowed; whereby said method enables the buyers desiring to purchase goods to buy the goods at low prices formed by the above two factors, "cooperative buying" and "competition". The method comprises: first step, in which a web page for auction is transmitted to internet users; second step, in which applications for purchase are received from internet users and the sequence of said applications is determined; third step, in which selling applications inclusive of the selling price and the quantity for sale are received from internet users; and fourth step, in which closing of the auction is determined, and, if the auction is not closed, the above steps are repeated from the first step on; if the auction is closed, the goods are allocated to said applicant buyers in the order of the sequence, beginning from the goods with the lowest bidding price.

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METHOD OF AUCTIONING BASED ON COOPERATIVE BUYING IN INTERNET

TECHNICAL FIELD OF THE INVENTION

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The present invention relates generally to a method for auction on the Internet, and specifically to a method for auction based on cooperative buying on the Internet, wherein the auction starting price of the goods offered for sale is notified; buying offers from the purchasers who wish to make cooperative purchasing of the goods at a price 10 not higher than the notified auction starting price are collected and further notified; and bidding of lower prices by the sellers triggered by the notified buying offers is allowed, whereby the cooperative purchasers are allowed to buy the goods at a low price formed by the two factors, "cooperative buying" and "competition".

15

BACKGROUND ART

A glance at the current electronic commerce sites on the Internet shows developments in two categories: the one category is sites which display and sell goods 20 at low prices as in the ordinary offline shops (e.g., Amazon or CDNow, etc.); and the other is Internet auction sites.

In the early stages, the Internet auction sites were considered merely as event-type sites since they usually dealt with some particular goods to be bargained away in contrast to the ordinary online shopping sites. Today, however, the online auction sites

are growing rapidly geared with the need of the enterprises to make clearance of their goods in store.

Generally, a user registration is required for purchase at the Internet auction sites for which credit card information of the user, address for delivery of the goods, 5 passwords, etc. need to be entered. After this procedure, a user ID is allocated so that the user may participate in the auction. If an article to purchase is selected, a screen displays detailed information on the selected article, such as the auction starting price, the steps of increasing unit bid price, the suppliable quantity, the current bid price, and the time of bid closing.

10 Further, there are also auction sites, which provides the so-called reverse auction. Reveres auction refers to a method of auctioning in which a purchaser is predetermined and the sellers place their bids by gradually decreasing the price, in contrast to general auction which refers to a method of auctioning in which a seller is predetermined and the purchasers place their bids by gradually increasing the price.

15 In the meantime, the cooperative purchasing as a kind of shopping mall has recently become popular among netizens as a new means of money-saving shopping. Originating mostly from PC communication communities, the cooperative purchasing methods have now developed to Internet shopping malls and many specializing in cooperative purchasing are currently existing on the Internet.

20 Cooperative purchasing refers to a method for purchasing where multiple purchasers are allowed to purchase a product collectively in a bundle at a low price. For example, a product sold ordinarily to an individual purchaser at 10,000won/pc, can be purchased at the price of 9,500won/pc, if ten pieces are purchased collectively at once. To repeat, the cooperative purchasing can have the same effect as a service provided by

a discount store.

Further, as the Internet auction sites keep growing recently, various methods of auctioning have been attempted.

In this connection, both the conventional auction and reverse auction have the 5 problem that either the seller or the purchaser cannot actively participate in the transaction since one of the two parties is predetermined and the other party is supposed to determine the price one-sidedly.

Furthermore, there exists another drawback in that the effectiveness of auction cannot but be degraded because an auction results only in one-to-one transaction. In 10 case of cooperative purchasing, too, no transaction is available other than one-to-many transactions.

Accordingly, there is a demand for developing an auctioning method on the Internet wherein both parties can actively participate in determining the prices. In particular, as the cooperative purchasing gets popularity, a method for auction which 15 allows the cooperative purchasing and many-to-many transactions is highly desired.

DETAILED DESCRIPTION OF THE INVENTION

20 The present invention, conceived in view of the above demand, aims to provide a method for auction based on cooperative purchasing wherein the auction starting price of the goods offered for sale is notified; buying offers from the purchasers who wish to purchase the goods cooperatively at a price not higher than the notified auction starting price are collected and further notified; the sellers' bidding of lower prices triggered by

the notified buying offers is allowed; whereby the goods can be afforded to cooperative purchasers at a low price determined by the two factors, "cooperative buying" and "competition".

In order to achieve the objectives as aforementioned, the present invention
5 comprises:

first step of transmitting an auction web page to an Internet user who accesses the auction server, including information on the goods offered for sale at the auction, the closing time of the auction, and the auction starting price, i.e. the lowest price of the respective surveyed;

10 second step of receiving purchase applications including the quantity to purchase from the Internet users who wish to purchase the goods at prices not higher than the auction starting price and allocating application serial numbers in the order of the applications;

15 third step of receiving selling applications including the selling quantity and selling price from the Internet users who wish to sell the goods at a price lower than the auction starting price; and

fourth step of either repeating the above steps if the auction is not closed; or assigning the goods, starting from the article having the lowest bid price, to the buying applicants in the order of their application serial numbers.

20

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 shows a network connection in the method of auction based on the cooperative buying on the Internet according to the present invention.

Figs. 2a through 2c illustrate web pages used in the method of auction based on the cooperative buying on the Internet according to an embodiment of the present invention.

Fig. 3 is a flow chart showing the method of auction based on the cooperative buying according to an embodiment of the present invention.

Fig. 4 is a flow chart illustrating the process of assigning the goods to the buying applicants in Fig. 3 in the order of their applications.

<Description of the Figures>

110a~110n : purchasers	120 : the Internet
10 130 : auction server	140a~140n : sellers

DESCRIPTION OF THE PREFERRED EMBODIMENT

15 Now, a description of the preferred embodiment of the present invention follows below, making reference to Figs. 1 through 4.

Fig. 1 shows a network connection in the method of auction based on the cooperative buying on the Internet according to the present invention.

Referring to Fig. 1, multiple purchasers 110a~110n can access the auction 20 server 130 through the Internet 120 and multiple sellers 140a~140n can access the auction server 130 through the Internet 120 as well.

The auction server 130 surveys prices of an item in existing shopping malls, notifies in the auction web page the lowest price among the surveyed prices as the auction starting price for the item, and the closing date of the auction after the server has

determined the auction closing date.

Further, the auction server 130 transmits the auction web page to the purchasers 110a~110n when they access the auction server 130.

An example of the transmitted auction web page is illustrated in Fig. 2a. Fig. 2a
5 shows the auction web page including the names 200a, 200b, 200c and images 210a,
210b, 210c of the goods for auction, the closing dates 211a, 211b, 211c of the auction
which indicate when each auction shall be closed, the requested quantities 212a, 212b,
212c which indicate the present state of the buying offers, the selling prices/quantities
213a, 213b, 214c which show the lowest bid price placed by the seller and the available
10 selling quantity, buttons for buying offer 214a~214n which enable the purchasers
110a~110n to make buying offer, buttons for selling offer 215a, 215b, 215c which
enable the sellers 140a~140n to make selling offer.

Further, if the buttons 216a, 216b, 216c provided with at the selling
price/quantity columns 213a, 213b, 213c are clicked, the present state of bidding such
15 as the selling quantity and selling price of a bidder, is displayed in a row so that both the
purchasers 110a~110n and the sellers 140a~140n can take appropriate measures by
based on the selling status.

In the mean time, the purchasers 110a~110n can estimate their turn based on the
order of their applications, by checking the requested quantity 212a, 212b, 212c which
20 represents the present state of the buying offers.

Furthermore, the purchasers 110a~110n can see the selling quantities and the
selling prices of the bid up to the present, by clicking the buttons 216a, 216b, 216c
provided with at the selling price/quantity columns 213a, 213b, 213c.

The purchasers 110a~110n can then show their intention to buy the article they

desire, by clicking the buttons for buying offer 214a, 214b, 214c, receiving an application form for buying offer from the auction server 130, filling in the application form, and transmitting the filled-in application back to the auction server 130.

An example of the transmitted application form for a buying offer is illustrated
5 in Fig. 2b. The application form for buying offer consists of the columns for entering the passwords 220, ID 221, name 222, e-mail address 223, contact address 224, manufacturer 225, product 226, product code 227, quantity to purchase 228, and address for delivery 229. Here, it is possible that the manufacturer, the product, and the product code are entered automatically when a button for buying a specific product 214a~214c
10 is clicked.

The auction server 130 allots a serial number to each of the received buying applications in the order of the application. The allotment of the serial numbers serves for determination of assignments of the product in case the selling quantity provided by the seller at the lowest price yields to be smaller than the quantity of the applicant
15 cooperative purchase at the close of the auction.

For example, in case the available quantity at the lowest selling bid price is 50pcs while the quantity requested for the cooperative purchasing is 100pcs, not all the 100pcs can be provided at the lowest selling bid price. Therefore, the first 50pcs are supplied to the cooperative purchasers in the order of their applications and those who
20 cannot be supplied with the product at the lowest selling bid price can buy the product of the sellers who have offered the next lowest selling price.

Since this method enables a buyer to purchase a desired product at a lower price if he applies for the cooperative buying earlier, it has an effect of encouraging more potential buyers to apply for the cooperative buying in a short period of time.

Next, the auction server 130 notifies the current status of the purchasing in the buying applicants' bulletin boards and updates the requested quantity 212a, 212b, 212c on the auction web page.

The auction server 130 transmits further the auction web page to the sellers
5 140a~140n as the sellers access the auction server 130.

In addition, the auction server 130 transmits a form for selling application to the sellers 140a~140n as the sellers offer to sell their products by clicking the buttons for selling offer 215a, 215b, 215c and allow them to re-transmit the application form after entering of the selling quantity and the bid price. Here, the bid price should not be
10 higher than the auction starting price. In this way, the purchasers 110a~110n can buy goods at a price below the lowest price in other shopping malls.

An example of the application form for selling offer is illustrated in Fig. 2c. This application form includes columns for entering the passwords 230, name 231, ID 232, the product name 233, selling quantity 234, the status of the product, i.e. whether
15 new or used 235, bid price 236, and others 237.

As next, the auction server 130 notifies the current status of selling offer on the selling applicants' bulletin boards as well as in the column, selling price/quantity 213a, 213b, 213c on the auction web page.

Meanwhile, in case where a seller who has already made his selling offer
20 wishes to bid an even lower price because another seller applicant has bid a price lower than his first bid price, or the number of buying applicants has been increased, is allowed to make new selling offer and to propose new conditions (price/quantity). In this case, selling price/quantity 213a, 213b, 213c column is updated to show the new conditions.

Then, after close of the auction, the auction server 130 allots the product to the purchasers according to their priorities.

Fig. 3 is a flow chart showing the method of auction based on the cooperative buying according to an embodiment of the present invention.

5 First, the prices at the existing shopping malls are surveyed (step S101); the lowest price among the surveyed prices is determined as the auction starting price (step S102); the auction starting price is notified on the auction web page (e.g., 330,000won/pc) (step S103); and the closing time of the auction is determined and notified on the auction web page (step S104).

10 As next, the auction server 130 receives buying applications from the purchasers willing to make a cooperative purchase (step S105), allots a serial number to each of the received buying applications (step S106), and updates the requested quantity on the auction web page (step S107).

15 Further, the auction server 130 receives selling offers from the sellers (step S109) and notifies the selling offers in the selling price/quantity column of the auction web page (step S110).

20 Still further, the auction server 130 checks if the auction has been closed (step S108), repeats the steps as above if the auction is not closed, and allots the products to the purchasers according to their priorities if the auction is closed (step S112), and terminates the process.

Fig. 4 is a flow chart the process of assigning the products (to the buying applicants) based on their buying applications as made in Fig. 3.

The auction server checks if the selling quantity at the lowest bid price is greater than the purchasing quantity after close of the auction (step S201). If the selling

quantity is greater than the purchasing quantity, it assigns the product at the lowest bid price to the buying applicants (step S202) and terminates the process.

If the selling quantity is smaller than the purchasing quantity, the products at the lowest bid price are assigned to the buying applicants based on the priority (step S203) 5 and checks if there remains other products which have not been assigned (step S204). If there is no such product, the process is terminated. If there are such products, the quantity of the products at the lowest bid price among these unassigned products is checked (step S205).

Then, it is checked whether the quantity of the product at the lowest bid price is 10 greater than the latter quantity for subsequent purchasing (step S206). If the former quantity is smaller than the latter quantity, the product at the lowest bid price are assigned to the purchasers (step S207) and the process is terminated. If the former quantity is smaller than the latter quantity, the above steps are repeated, beginning from the step S203.

15 Although the present invention has been described above with reference to the preferred embodiment, the scope of the rights of the subject invention is not restricted thereto, but rather shall be determined by the claims appended below.

INDUSTRIAL APPLICABILITY

20

The present invention discloses a method for auction, wherein an auction starting price of each goods offered for sale at the auction is notified; buying offers from the purchasers who wish to make a cooperative purchasing of the goods at a price not higher than the notified auction starting price are received and further notified; lower

biddings by the sellers triggered by the notified buying offers is allowed; whereby the goods can be supplied to the cooperative purchasers at a low price determined by the two factors, "cooperative buying" and "competition".

Namely, the sellers are permitted to bid prices lower than the lowest price in the 5 existing shopping malls and then linked to the purchasers in the order of the price grad beginning from the lowest bid price, whereby the purchasers are allowed to buy the goods at a price lower than the corresponding price in the existing shopping malls and the sellers are allowed to sell the goods in large quantities owing to the cooperative purchasing.

What is claimed is:

1. A method of auction based on cooperative buying, comprising:
 - first step of transmitting an auction web page to an Internet user who accesses the auction server, comprising information on the goods offered, the auction starting price of said goods, whereby said auction starting price is determined by the lowest price of the respective good surveyed in the existing shopping malls, and the closing time of the auction;
 - second step of receiving buying applications including the requested quantity from said Internet user who wish to buy said goods at a price not higher than said auction starting price, and allotting the application serial numbers to the received buying applications;
 - third step of receiving selling applications including the selling quantity and the bid price not higher than said auction starting price from said Internet users who wish to sell said goods at a price below said auction starting price; and
 - fourth step of checking whether or not the auction has been closed, and either repeating the above steps if the auction is not closed, or assigning the goods, starting from the article having the lowest bid price, to said buying applicants in the order of their application serial numbers.

20

2. The method of auction based on cooperative buying as set forth in Claim 1, which further comprises:
 - fifth step, of updating the requested purchasing quantities on the auction web page after checking the requested purchasing of the received buying applications,

following said second step; and

sixth step of updating the selling price/quantity columns on the auction web page after checking the bid prices and the selling quantities of the received selling applications, following said third step.

5

3. The method of auction based on cooperative buying as set forth in Claim 1, wherein the buying application in said second step includes indication of the delivery address.

10 4. The method of auction based on cooperative buying as set forth in any one of Claim 1 through Claim 3, wherein said third step includes the steps of:

3-1) checking whether or not the selling quantity of the goods offered at the lowest bid price is not smaller than the purchasing quantity;

15 3-2) assigning the goods offered at the lowest bid price to all of the buying applicants if the selling quantity is not smaller than the purchasing quantity based on the result of checking in said step 3-1);

3-3) assigning the goods offered at the lowest bid price to the buying applicants by priorities if the selling quantity is smaller than the purchasing quantity based on the result of checking in said step 3-1);

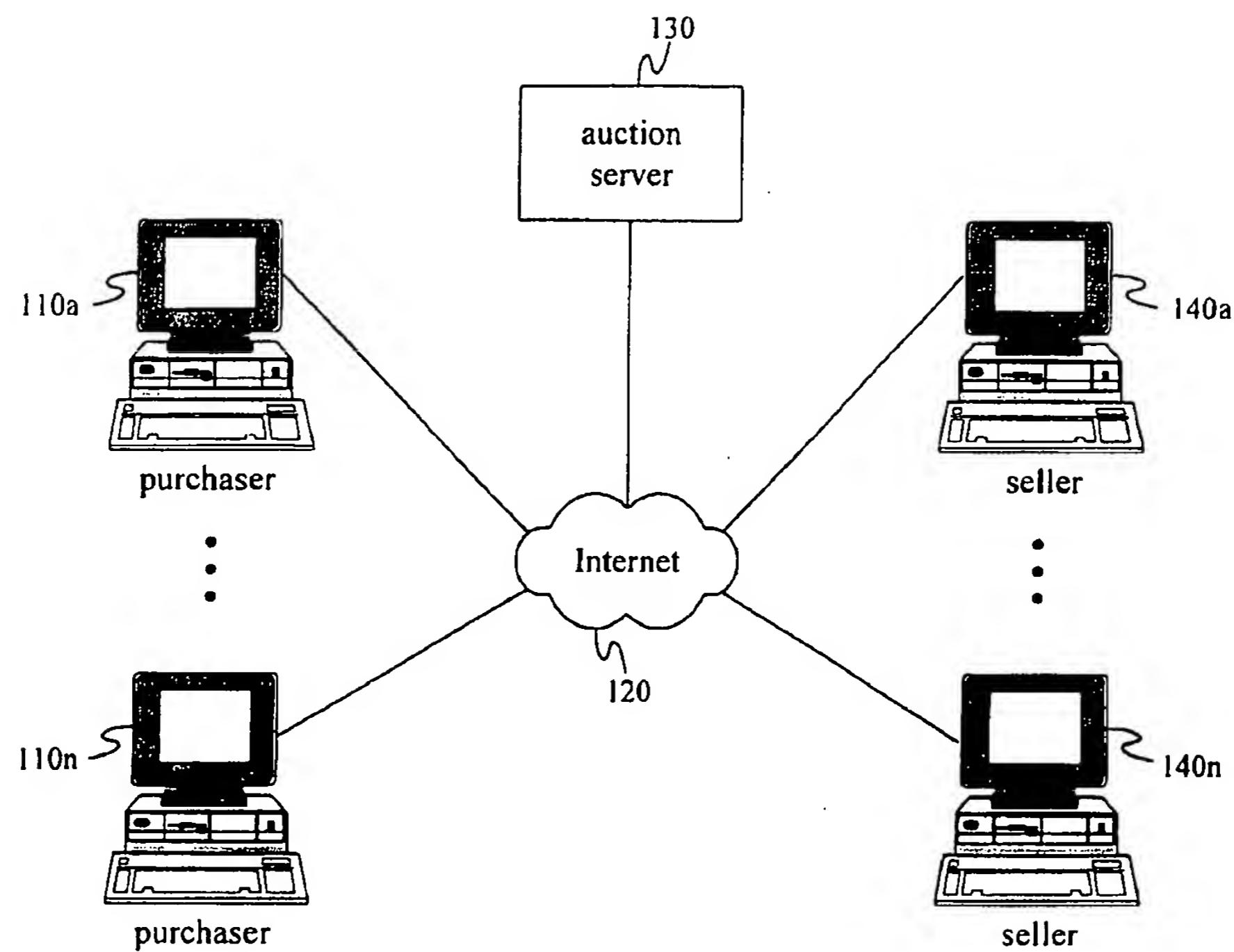
20 3-4) checking whether or not there remains goods not yet assigned to the buying applicants among the goods offered for auction by said Internet user;

3-5) terminating the auction if there remains no such good based on the result of checking in said step 3-4); or, checking the quantity of the goods offered at the lowest bid price among such goods;

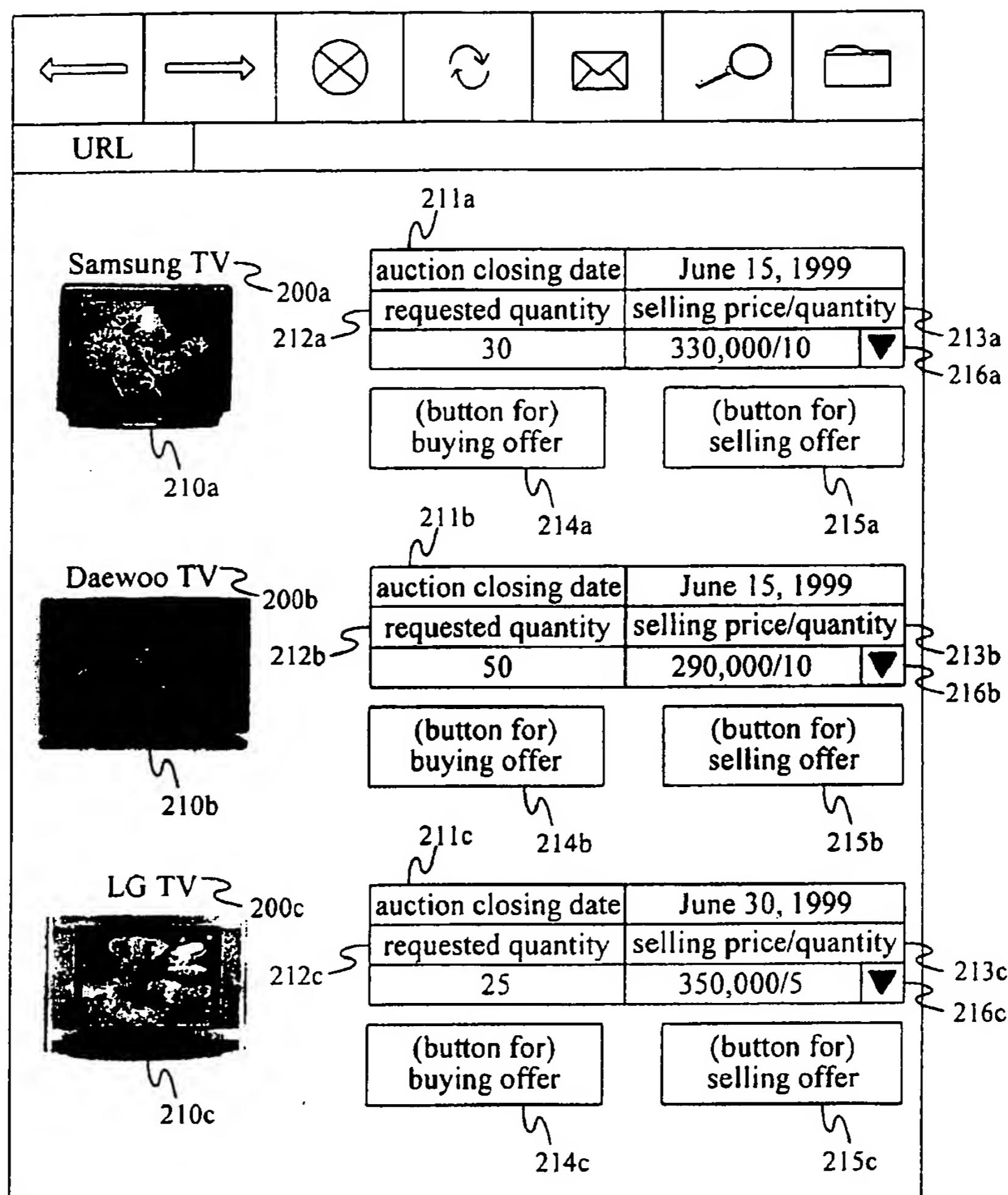
- 3-6) checking whether or not the selling quantity checked in said step 3-5) is not smaller than the remainder of the purchasing quantity;
- 3-7) assigning the goods offered at the lowest bid price to the buying applicants if the selling quantity is not smaller than the remainder of the purchasing quantity based
- 5 on the result of checking in said step 3-6); and
- 3-8) repeating said steps 3-4) through 3-7) if the selling quantity is smaller than the remainder of the purchasing quantity based on the result of checking in said step 3-6), until the total quantity offered is all assigned.

【DRAWINGS】

【Fig. 1】



【Fig. 2a】



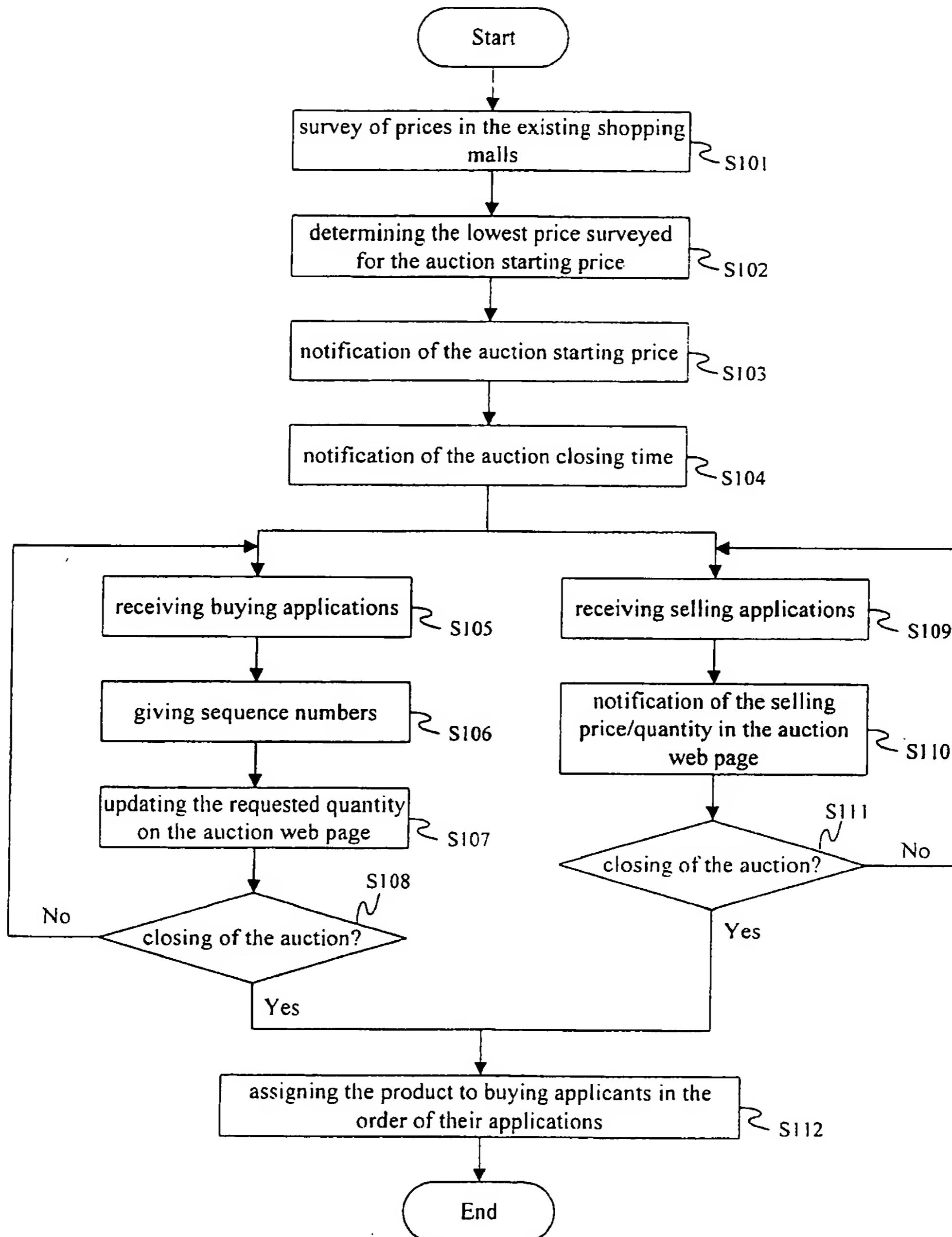
【Fig. 2b】

URL						
Application for buying						
Passwords	<input type="text"/> 220		ID	<input type="text"/> 221		
Name	<input type="text"/> 222		E-mail	<input type="text"/> 223		
Contact address	<input type="text"/> 224		Manufacturer	<input type="text"/> 225		
Product	<input type="text"/> 226		Product code	<input type="text"/> 227		
Quantity	<input type="text"/> 228		Address for delivery	<input type="text"/> 229		

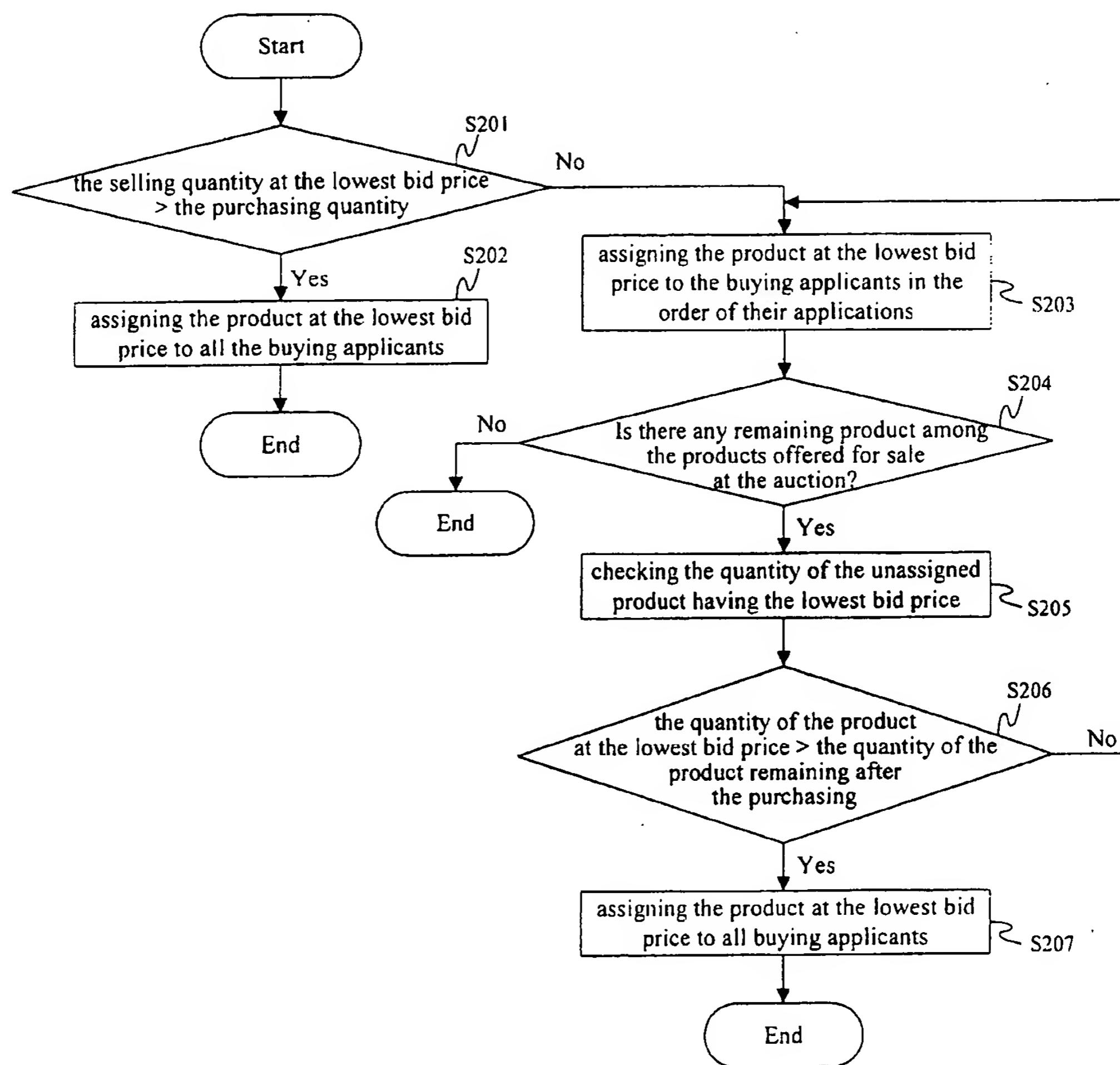
[Fig. 2c]

URL						
Application for selling						
Passwords	<input type="text"/> 230	Name	<input type="text"/> 231			
ID	<input type="text"/> 232	Product	<input type="text"/> 233			
Selling quantity	<input type="text"/> 234	New or used	<input type="text"/> 235			
Bid price	<input type="text"/> 236					
Others	<input type="text"/> 237					

[Fig. 3]



【Fig.4】



INTERNATIONAL SEARCH REPORT

International application No.

PCT/KR00/00578

A. CLASSIFICATION OF SUBJECT MATTER

IPC7 G06F 17/60

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7 G06F 19/00, IPC7 G06F 19/00, IPC7 H04M 15/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 11-213083 A (IBM CO. LTD) 6. AUGUST. 1999 FIG 1, 2, ABSTRACT, CLAIMS 1, 4, 8	1-4
A	JP 09-101997 A (FUJITSU GENERAL CO. LTD) 15, APRIL. 1997 FIG 1, 2 ABSTRACT, CLAIMS 1	1
A	WO 98/10361 A (WALKER ASSET LTD.) 12. MARCH 1998 FIG 1, 2, 3, 4, 5, 6, 7, 20-24 ABSTRACT, CLAIMS 1, 4, 29, 31, 33, 3752, 57, 68, 71, 83, 95, 127, 137, 154	1-4

 Further documents are listed in the continuation of Box C. See patent family annex.

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- "&" document member of the same patent family

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25 SEPTEMBER 2000 (25.09.2000)

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Authorized officer

LEE, Un Cheol

Telephone No. 82-42-481-5784

